Reviewer's report

**Title:** Tumor volume in subcutaneous mouse xenografts measured by microCT is more accurate and reproducible than determined by 18F-FDG-microPET or external caliper.

**Version:** 1  **Date:** 4 August 2008

**Reviewer:** Rodney Hicks

**Reviewer's report:**

The methodology, results and conclusions are generally well described. However, the methodology used to determine PET metabolic volume should be further expanded. It would be helpful to know whether the volume-of-interest was defined on a cut-off SUV threshold, a tumour-to-back-ground ratio, a set percentage of the maximum SUV or a qualitative assessment. All of these have been used in various clinical studies. Additionally, the authors should state if and how necrotic tumour elements were handled in this analysis. While there might be an excellent correlation between the mass volume of the lesion and the CT calculation, it may not necessarily reflect the volume of viable cells in a lesion, which is the target of therapeutic intervention.

The discussion should also mention the potential for using high resolution ultrasound and MRI for tumour volume and their relative merits and limitations compared to CT.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I have no competing interests.